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09/893,176	06/27/2001	Albert Hasper	ASMINT.017AUS	4537

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EXAMINER

TSAL, CAROL S W

ART UNIT PAPER NUMBER

2857

DATE MAILED: 10/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/893,176

Applicant(s)

HASPER, ALBERT

Examiner

Carol S Tsai

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 33-37 is/are allowed.
- 6) ☒ Claim(s) 1-5, 12-14 and 23-32 is/are rejected.
- 7) ☒ Claim(s) 6-11 and 15-22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Publication 2002/0055801 to Reiss et al.

Reiss et al. disclose a system for monitoring consumption of utilities by semiconductor fabrication processes, comprising: at least one semiconductor process tool (semiconductor fabrication tool 1002 shown on Fig. 10) comprising a plurality of process-control devices (first sensor 1008 and second sensor 1010 shown on Fig. 10) for controlling process conditions within the process tool; at least one tool controller (controller 1012 shown on Fig. 10) communicating with the plurality of process-control devices according to a process recipe for treating workpieces within the process tool; and computer software residing in a memory (memory 1014 shown on Fig. 10) of said tool controller, the computer software configured to collect data reflecting resource consumption from the plurality of devices and to compile and store said data (see Fig. 10 and paragraphs 0002, 0063, 0085, and 0086).

As to claim 2, Reiss et al. also disclose at least one heating element and at least one mass flow controller (see paragraphs 0063-0065).

As to claim 3, Reiss et al. also disclose the computer software compiling and storing data relating to the power output to the at least one heating element and gas flow through the at least one mass flow controller (see paragraph 0086).

As to claims 4 and 5, Reiss et al. also disclose the computer software calculates resource consumption from inputs originating from the process-control devices and fed back into the tool controller (see paragraphs 0042-0050).

As to claim 30, Reiss et al. also disclose a method of determining resource consumption on a semiconductor process tool, the method comprising: monitoring electronic inputs and outputs controlling a semiconductor process recipe and calculating resource consumption from said inputs and outputs, wherein monitoring and calculating are performed on the semiconductor process tool (see Fig. 10 and paragraphs 0002, 0063, 0042-0050, 0085, and 0086).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12-14, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiss et al. in view of U. S. Patent No. 5,586,039 to Hirsch et al.

As noted above, with respect to claims 12 and 29, Reiss et al. disclose the claimed invention, except for the computer software comprising an editor configured to select user-defined parameters for monitoring.

Hirsch et al. teach the computer software comprising an editor configured to select user-defined parameters for monitoring (see Figs. 2-19).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Reiss et al.'s method to include the computer software comprising an editor configured to select user-defined parameters for monitoring, as taught by Hirsch et al., in order to provide the user with the operation of manipulating data with selected user-defined parameters via a display GUI.

As to claims 13 and 14, Reiss et al. also discloses the user-defined parameters selecting from the group consisting of process gas flow, purge gas flows, electrical power consumption, and cooling water flows (see paragraphs 0002 and 0063-0065).

6. Claims 23-25, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiss et al. in view of U. S. Patent No. 5,586,059 to Oshelski et al.

As noted above, with respect to claims 23 and 24, Reiss et al. disclose the claimed invention, except for the computer software comprising a report generator configured to generate resource consumption reports relating to user-selected ones of parameters.

Oshelski et al. teach the computer software comprising a report generator configured to generate resource consumption reports relating to user-selected ones of parameters (see Fig. 4 and col. 6, lines 17-35).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Reiss et al.'s method to include the computer software comprising a report generator configured to generate resource consumption reports relating to user-selected ones of parameters, as taught by Oshelski et al., in order that reports of selected tests performed with the stepper can be provided for subsequent analysis.

As to claim 25, Reiss et al. do not disclose the report generator allowing user selection of a report time span.

Oshelski et al. teach the report generator allowing user selection of a report time span (see Fig. 13).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Reiss et al.'s method to include the report generator allowing user selection of a report time span, as taught by Oshelski et al., in order that the time stamp of test can be provided in the report.

As to claims 27 and 28, Reiss et al. do not disclose the resource consumption reports containing summed parameter values and process recipe details.

Oshelski et al. teach the resource consumption reports containing summed parameter values and process recipe details (see Fig. 9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Reiss et al.'s method to include the resource consumption reports containing summed parameter values and process recipe details, as taught by Oshelski et al., in order that report with summed parameter values can be used for further analysis.

7. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reiss et al. in view of U. S. Patent No. 6,496,200 to Snibbe et al.

As noted above, Reiss et al. disclose the claimed invention, except for the report generator allowing user selection of a report resolution.

Snibbe et al. teach the report generator allowing user selection of a report resolution (see col. 9, lines 8-37).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Reiss et al.'s method to include the report generator allowing user selection of a report resolution, as taught by Snibbe et al., in order that the resolution of the haptic display produced by the haptic interface device can be changed by the user (see Abstract, lines 3-4).

8. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiss et al. in view of U. S. Patent No. 6,368,975 to Balasubramhanya et al.

As noted above, Reiss et al. disclose the claimed invention, except for said inputs and outputs including analog/digital signals.

Balasubramhanya et al. teach said inputs and outputs including analog/digital signals (see col. 14, line 64 to col. 15, line 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Reiss et al.'s method to including said inputs and outputs include analog/digital signals, as taught by Balasubramhanya et al., in order that input and output

including either analog signals or digital signals can be flexibly processed by the semiconductor wafer processing tool.

***Allowable Subject Matter***

9. Claims 6-11 and 15-22, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 33-37 are allowed.

U. S. Patent No. 6,408,220 to Nulman in view of U. S. Patent No. 5,586,059 to Oshelski et al. are references closest to the claimed invention. Nulman in combination with Oshelski et al. disclose a method for automatically monitoring consumption of utilities in at least one process tool with software connected to the process tool, comprising: conducting sampling of data relating to consumption of utilities from a plurality of devices and based on said sums, generating reports relating to said utility consumption data in response to requests from a user. However, Nulman in combination with Oshelski et al. do not teach conducting continual high-frequency sampling of data and storing said data in short-term memory; at specified intervals, calculating sums of said data, storing said sums in long-term memory, and erasing said data from short-term memory; and including all of the other limitations in the respective independent claims.

***Response to Arguments***

11. Applicant's arguments with respect to claims 1-5, 12-14, and 23-32 have been considered but are moot in view of the new ground(s) of rejection.



***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

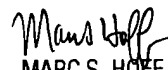
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol S. Tsai whose telephone number is (703) 305-0851. The examiner can normally be reached on Monday-Friday from 7:30 AM to 4:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703) 308-1677. The fax number for TC 2800 is (703) 308-7382. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2800 receptionist whose telephone number is (703) 308-1782.

Art Unit: 2857

In order to reduce pendency and avoid potential delays, Group 2800 is encouraging FAXing of responses to Office actions directly into the Group at (703) 308-7382. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2800 will be promptly forwarded to the examiner.

Carol S. W. Tsai

10/10/03

  
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